



1. (three times amended)

A process for overmolding tubes comprising the steps of:

inserting a tube of a first polymer, having an inner diameter, at least partially into a mold and at least partially onto a cylindrical mandrel, the mandrel having a base and a tip, an outer diameter of said mandrel dimensioned so as to allow the inner diameter of the tube to slide thereon, said mold containing a void for receiving a second polymer, the void co-acting with the mandrel and the tube to define an overmolding shape;

injection molding the second polymer over the tube and the mandrel in the void of the mold; and

crosslinking the first and second polymers independently to an initial degree, and

independently crosslinking said polymers to a higher final degree [wherein the step of crosslinking independently increases the degree of crosslinking of each polymer to a higher final amount].

<sup>25</sup>  
--86. The process of claim <sup>20</sup>81 wherein

the overmolding shape comprises

a sealing surface region at the base of the mandrel and

a tube contacting region adjacent thereto.--

<sup>26</sup>  
--87. The process of claim <sup>20</sup>81 wherein

the overmolding shape comprises an internally threaded engaging surface region at the base of the mandrel and

a tube contacting region adjacent thereto.--

~~27~~ 20  
--88. The process of claim 81 wherein

the overmolding shape comprises an externally threaded engaging  
surface region at the base of the mandrel and

a tube contacting region adjacent thereto.--

~~28~~ 20  
--89. The process of claim 81 wherein

the first and second polymers are polyethylene.--

~~29~~ 28  
--90. The process of claim 89 wherein

an initial degree of crosslinking of each of the first and second polymers is  
in the range of from about 35% to about 50% and the final degree  
of crosslinking of each of the first and second polymers is greater  
than or equal to about 50%.--

~~30~~ 25  
--91. The process of claim 86 wherein

the sealing surface region is selected from the group consisting of a cup-  
shaped void and a radiused void; and wherein

the tube contacting region is an essentially tubular void.--

~~31~~ 30  
--92. The process of claim 91 wherein

the tube further comprises an annular shelf interposed between the  
sealing surface region and the tube contacting region.--

~~32~~ 26  
--93. The process of claim 87 wherein

the internally threaded engaging surface region is an internally threaded  
annular void; and wherein

the tube contacting region is an essentially tubular void.--

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~~33~~  
~~94.~~ The process of claim ~~32~~ wherein

the tube further comprises a n-sided shelf interposed between the  
internally threaded engaging surface region and

the tube contacting region and wherein n is an integer value greater than  
or equal to 4.--

~~34~~  
~~95.~~ The process of claim ~~33~~ wherein

the externally threaded engaging surface region is a threaded annular  
void; and wherein

the tube contacting region is an essentially tubular void.--

~~35~~  
~~96.~~ The process of claim ~~34~~ wherein

the tube further comprises a n-sided shelf interposed between the  
externally threaded engaging surface and

the tube contacting region and wherein n is an integer value greater than  
or equal to 4.--

~~36~~  
~~97.~~ The process of claim ~~35~~ wherein

the tube further comprises a mesh overbraid applied prior to the injection  
molding step.--

~~37~~  
~~98.~~ The process of claim ~~36~~ which further comprises

the step of inserting a nut onto the tube after the step of injection molding.-

~~38~~  
~~99.~~ The process of claim ~~37~~ which further comprises the step of

molding a retaining ring onto the first polymer tube by heating a portion of  
the tube posterior to the nut and

compressing at least one end of the tube along a longitudinal axis of the  
tube, a mandrel having been inserted into the tube prior to the step  
of compressing.--

<sup>39</sup>  
--100. The process of claim <sup>20</sup>81 wherein

at least one of the first and second polymers is at least partially  
crosslinked before the step of crosslinking.--

<sup>40</sup>  
--101. The process of claim <sup>21</sup>81 wherein,

an initial degree of crosslinking of the first polymer is less than an initial  
degree of crosslinking of the second polymer.--

### **Status**

The application presently contains the following claims:

<i>Independent Claim #</i>	<i>Dependent Claim #s</i>
1	63-80
81	82-101

Claim 1 has been amended while claims 86-101 are newly submitted. Support for the claim amendment can be found in claim 66 as originally filed. Support for the newly added claims can be found in claims 63-80 as originally filed. Independent claim 81 as well as dependent claims 63-80 and 82-85 are resubmitted without amendment.

The examiner has indicated that claims 81-85 are allowable over the prior art of record.

In accordance with §1.121(c), the claims provided in this amendment section reflect the changes which are to be made in the claims, and a clean copy implementing said changes is included at the end of this Amendment Response in accordance with §1.121(c)(3).

### **35 U.S.C. §112 Rejection, first paragraph & Responsive Arguments**

No rejections are pending in this application.

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**35 U.S.C. §112 Rejection, second paragraph & Responsive Arguments**

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The examiner has rejected claims 1 and 63-80 under this section, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The examiner indicated that in the last office action, claim 66 was indicated to be allowable and requested clarification.

Claim 1 now fully incorporates the limitations of claim 66 and is believed to now address the issues raised by the examiner. Claims 63-80, by virtue of their dependency on claim 1, are also believed to be allowable also.

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**35 U.S.C. §102 Rejection & Responsive Arguments**

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There are no pending rejections under this section.

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**35 U.S.C. §103 Rejection & Responsive Arguments**

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There are no pending rejections under this section.

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**Request for Reconsideration**

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Applicant believes that independent claims 1 and 81 clearly define over the prior art and that the distinctions between the present invention and the prior art would not have been obvious to one of ordinary skill in the art. Additionally, claims 63-80 depend from and contain all of the limitations of amended claim 1; and claims 82-101 depend from and contain all of the limitations of claim 81 and by the limitations contained in the base independent claims, are felt to be patentable over the prior art by virtue of their dependency from independent claims which distinguish over the prior art of record. All pending claims are thought to be allowable and reconsideration by the Examiner is respectfully requested.

It is respectfully submitted that no new additional searching will be required by the examiner in light of the fact that claims 63-80 had no prior art rejections pending. Additionally, claims 81-85 had been indicated to be allowable by the examiner, and the addition of further limitations should not require any new searching or additional work on the part of the examiner.